

# ***APPARATUS AND METHOD FOR EXACT CONTROL OF CROSS OVER PRESSURES, INCLUDING HIGH AND LOW PRESSURES, BY DYNAMICALLY VARYING THE COMPRESSOR PUMP OUTPUT IN ALTERNATING PRESSURE SUPPORT SURFACES***

## **Abstract**

An alternating pressure support surface for use by patients requiring bed rest. The air pressure control system used by the alternating pressure surface dynamically controls air pressure in multiple inflatable compartments and further controls the cross over pressure as sets of inflatable compartments are simultaneously being inflated and deflated. A pressure transducer provides feedback which is used to dynamically adjust the output pressure produced by a pump to prevent over inflation or under inflation and ensure that cross over air pressure is properly maintained to prevent under inflation which results in bottoming out.